

ABSTRACT OF THE DISCLOSURE

A code volume control section refers to an input image and a reference image stored in a frame memory and thereby sets a quantization step for each block so that the volume of coded data generated for a frame will be a preset volume. A data loss probability estimation section estimates a data loss probability (the probability that data loss will occur to a target block due to transmission error) based on a code volume predicted value of the target block obtained by the code volume control section and the code volume from the latest synchronization code pattern to a block just before the target block. A degradation estimation calculation section calculates an estimate of degradation of the target block caused by errors based on image degradation power and the data loss probability. A mode selection section selects an optimum encoding mode for the target block based on the degradation estimate of the target block and an estimate of frame coding distortion. Forced refresh (intra-frame encoding of a block) is carried out properly and effectively, thereby image degradation is reduced without deteriorating coding efficiency.

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